

Fermilab Career Panel

Fady A Harfoush
August 20, 2003

Brief Biography

- Ph.D in EECS
Northwestern University, 1988
- FNAL Accelerator Physics
1988 -1994
- Sangamon Trading 1994 - 1996
- Bank One 1996 - April 2003
- Ritchie Capital Management
April 2003 - Present
- Future ??????

About.....

- Making Connections
- Dealing with stereotypes & labels
- Groups and Roles
- Titles & Activities
- Qualifications, and skills
- Making the Transition
- Final thoughts

Making Connections

- 24 hrs Control Room \Longleftrightarrow 24 hrs Trading Room
- International Collaboration \Longleftrightarrow International Partnership
- Scientist / System \Longleftrightarrow Quant / IT System
- Higher Luminosity \Longleftrightarrow Higher Returns
- Optimize S/N \Longleftrightarrow Optimize Return/Risk
- Stochastic PDEs, Data Analysis, Modeling & MC Simulations applied in many other areas than physics including WallMart !

Dealing with Stereotypes & Labels The Scientist.....

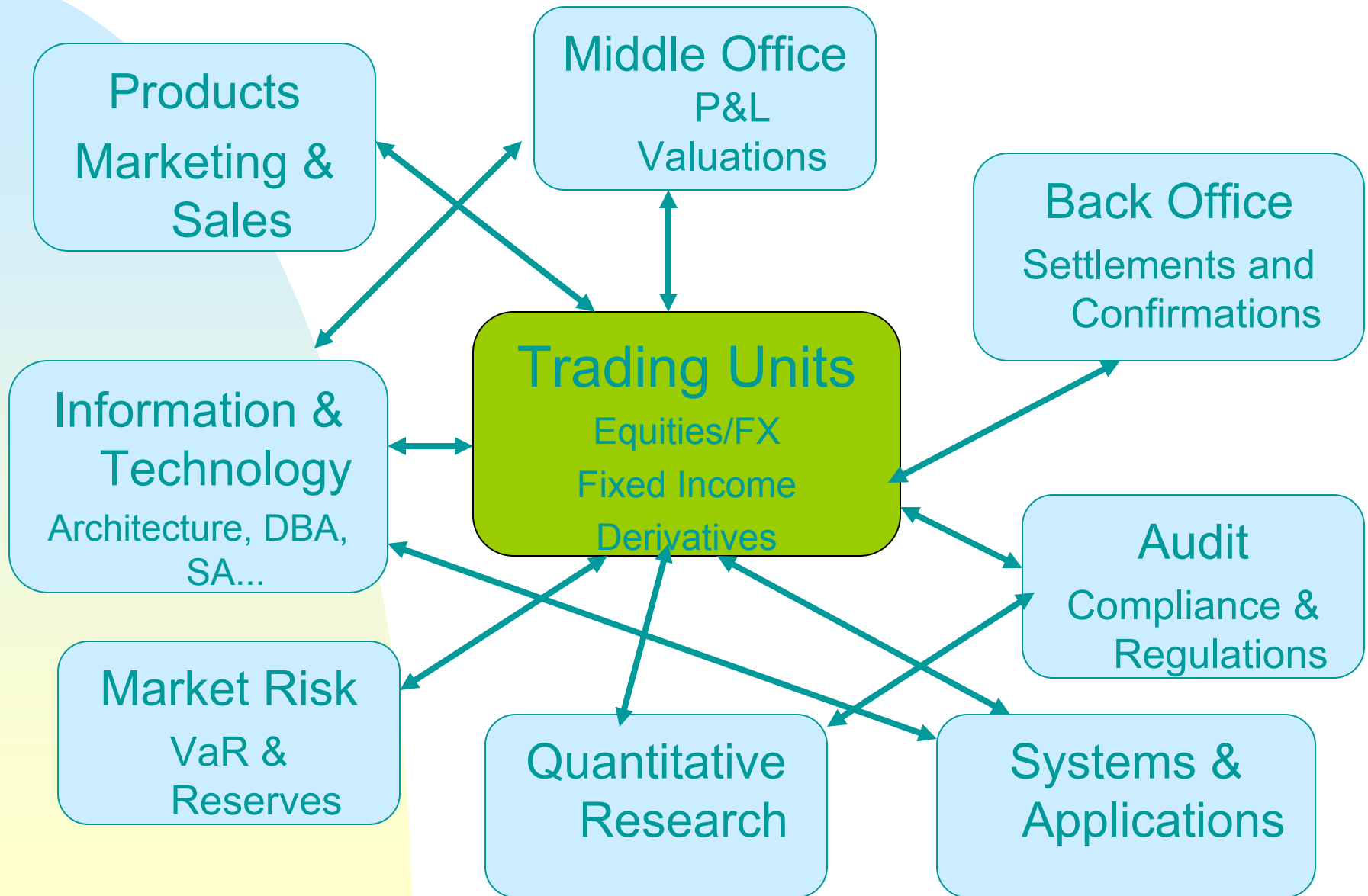
- “Rocket Scientist” a Wall Street exaggeration !
- Good with equations/computers not people
- Detailed oriented, fixed ideas, not flexible/trainable
- Theoretical, lacks practicality.
- Trained for long term research work.
- Little appreciation to schedules, setting priorities, and quick deliverables.

Dealing with Stereotypes & Labels

The Trader.....

- Energetic, arrogant, works well under pressure
- Risk taker, adventurous
- Greedy, egocentric
- Fast thinker, quick decision maker
- Street smart
- Short term focus on results
- “Time is money” awareness

Groups, Roles, and Relations



Titles & Activities

- Roles & titles can vary from business analyst, to system support, to SA, to DBA, to programmer, to manager, to research, to quant, to director. Plus the VP, AVP, FVP, SVP, ...!!!!
- In a corporate environment strict division of roles, tasks, and territories.
- Two main separate lines of management: Business & IT.
- Core quantitative work is usually limited to a small group. Confidentiality among peers !

Making the Transition

- Be Humble: keep your Ph.D. at a low profile if needed.
- Be Flexible: ability to wear different hats to get the job done
- Relation/Network/Communication
- Expand your horizon and marketability strategy: Focus on your potential to get a job done and not the details of your current work.
- Think globally beyond your current geographical boundaries.

Skills & Qualifications

- A degree can be your ticket for a job interview. Getting the job and being successful is a different story !
- Every Ph.D. has the potential to do the job but not necessarily the mind set and attitude to do the job.
- For certain type of work like a broker, investment advisor, portfolio manager a certification like CFA would be required or helpful.
- MBA, or MS in Financial Mathematics (+ Ph.D.)...are more for the networking and the exposure than the learning.

Final Thoughts

- Job security replaced by career security
- FIRST relationships, networking, communications, attitudes, and politics.
- Look for growth opportunities and challenges, then financial reward.
- Big corporations heavy into bureaucracy, politics, and networking.
- Creativity vanishing...less room for innovation.
- The late 80s boom for rocket scientists almost gone. Quick and cheap !
- Only by taking risks you can learn....